3. CURRENT AND MAXIMUM WASTE INVENTORIES AND CHARACTERISTICS

The VES-SFE-106 tank system manages characteristically hazardous waste that carries the HWMA/RCRA hazardous waste number D006 (cadmium). Based on a review of operations and activities conducted at CPP-603, no listed waste was discharged to the VES-SFE-106 tank. This tank has a maximum waste inventory of 25,000 gal, but is currently estimated to contain approximately 5,000–7,000 gal of hazardous sludge (EDF-3983, 2003). Residual liquids in the VES-SFE-106 tank are nonhazardous based on the wastes discharged to the tank from the BWTS and the basins (i.e., HWMA/RCRA-hazardous solids and basin water) (EDF-2619, 2002; EDF-2621, 2001). Liquid wastes generated during HWMA/RCRA closure activities will be characterized and disposed based on a hazardous waste determination (HWD).

The estimated maximum volume of the piping and ancillary equipment associated with the VES-SFE-106 tank system is 570 gal (see Table 3-1). However, the lines associated with the VES-SFE-106 tank are generally sloped to gravity-feed liquids to and from the tank; therefore, the associated piping is assumed to be free of liquids with little or no residual solids.

The HWMA/RCRA contaminants of concern (COCs), based on analytical data from historical sampling results from the VES-SFE-106 waste tank, the characterization of associated VCO units (constituents detected during analysis), are 2-butanone, 4-methyl-2-pentanone, aluminum, antimony, arsenic, barium, beryllium, cadmium, chromium, lead, mercury, nickel, selenium, silver, thallium, toluene, vanadium, and zinc.

Table 3-1. VES-SFE-106 tanks system current and maximum waste inventory.

Description	Current Waste Inventory	Maximum Waste Inventory
VES-SFE-106 waste tank sludge	5,000–7,000 gal	25,000 gal
Ancillary piping	Residual	570 gal

4. CLOSURE PERFORMANCE STANDARDS

This section describes the performance standards for closure of the VES-SFE-106 tank system (IDAPA 58.01.05.009 [40 CFR 265.111 and 265.197]) and the activities that will be conducted to demonstrate that the closure performance standards have been met.

4.1 Regulatory Closure Performance Standards

The closure performance standards identified in IDAPA 58.01.05.009 (40 CFR 265.111 and 265.197) applicable to the VES-SFE-106 tank system closure are:

1. The owner or operator must close the facility in a manner that minimizes the need for further maintenance (IDAPA 58.01.05.009 [40 CFR 265.111(a)]).

2. The owner or operator must close the facility in a manner that controls, minimizes, or eliminates to the extent necessary to protect human health and the environment, post-closure escape of hazardous waste, hazardous constituents, leachate, contaminated runoff, or hazardous waste decomposition products to the ground or surface waters or to the atmosphere (IDAPA 58.01.05.009 [40 CFR 265.111(b)]).

3. The owner or operator must close the facility in a manner that complies with the closure requirements of this subpart, including, but not limited to, the requirements of 40 CFR 265.197, 265.228, 265.258, 265.280, 265.310, 265.351, 265.381, 265.404, and 265.1102 (IDAPA 58.01.05.009 [40 CFR 265.111(c)]).

4.2 Required Activities for Achieving Closure Performance Standards

The VES-SFE-106 tank system closure and waste management activities to be conducted under HWMA/RCRA closure are described in detail in Section 5 of this closure plan. The closure performance standards will be achieved by the following measures.

4.2.1 Standard 1

The owner or operator must close the facility in a manner that minimizes the need for further maintenance (IDAPA 58.01.05.009 [40 CFR 265.111(a)]).

The activities required to meet this standard are:

- The hazardous waste inventory will be removed and disposed
- Tank system components undergoing HWMA/RCRA closure will either be decontaminated to the site-specific action levels specified in this HWMA/RCRA closure plan or will be removed and disposed.

4.2.2 Standard 2

The owner or operator must close the facility in a manner that controls, minimizes, or eliminates to the extent necessary to protect human health and the environment, post-closure escape of hazardous

waste, hazardous constituents, leachate, contaminated runoff, or hazardous waste decomposition products to the ground or surface waters or to the atmosphere (IDAPA 58.01.05.009 [40 CFR 265.111(b)]).

The activities required to meet this standard are:

- The hazardous waste inventory will be removed and disposed
- Tank system components undergoing HWMA/RCRA closure will either be decontaminated to the site-specific action levels specified in this HWMA/RCRA closure plan or will be removed and disposed.

4.2.3 Standard 3

At closure of a tank system, the owner or operator must remove or decontaminate all waste residuals, contaminated containment system components (liners, etc.), contaminated soils, and structures and equipment contaminated with waste, and manage them as hazardous waste, unless §261.3(d) of this Chapter applies. The closure plan, closure activities, cost estimates for closure, and financial responsibility for tank systems must meet all of the requirements specified in subparts G and H of this part (IDAPA 58.01.05.009 [40 CFR 265.197(a)]).

The activities that will be conducted to close the tank system in accordance with 40 CFR 265.197(a) are:

- The hazardous waste inventory will be removed and disposed.
- Tank system components undergoing HWMA/RCRA closure will either be decontaminated to the site-specific action levels specified in this HWMA/RCRA closure plan or will be removed and disposed to the extent practicable.
- Soils associated with buried piping will be addressed by performing an integrity evaluation on the piping. If the integrity evaluation demonstrates that no release to the environment has occurred, then soil sampling is not required.
- Soils associated with the CPP-648 building are included within the boundaries of an established Federal Facility Agreement and Consent Order (FFA/CO) site and will be subject to characterization under this HWMA/RCRA closure once removal of the CPP-648 building and VES-SFE-106 tank vault is complete. Remedial investigation and/or remedial activities with respect to these soils will be completed under the provisions of the FFA/CO (DOE-ID 1991). Completion of these FFA/CO activities will not be a criterion for closure certification. Provisions for sampling and analysis of these soils under HMWA/RCRA closure are included in the FSP associated with this closure plan (ICP 2005). Soil samples will be collected from areas associated with CPP-648 following removal of the concrete within the timeframe specified in the schedule identified in Section 6 and provided to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (42 USC 9601 et seq., 1980) program (i.e., Waste Area Group [WAG] 3). A summary of validated analytical data resulting from the sampling specified in the FSP will be included in the PE certification for closure of the VES-SFE-106 tank system.

The activities that will be conducted to close the tank system in accordance with 40 CFR 265.197(b) and (c) are:

- Analytical data for soils located within the established FFA/CO sites will be provided to the CERCLA program (i.e., WAG 3) for evaluation as part of ongoing activities under the FFA/CO (DOE-ID 1991, 1999). No further actions with regard to these soils will be required to certify closure of the VES-SFE-106 tank system.